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1 RECORD OF ORAL HEARING

2
3 UNITED STATES PATENT AND TRADEMARK OFFICE

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6 BEFORE THE BOARD OF PATENT APPEALS
7 AND INTERFERENCES
8

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10 *Ex parte* HANS BEER, KLAUS FROESE,
11 LOTHAR KNOECHELMANN and DUANE B. PIECHOCKI
12

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14 Appeal No. 2010-000331
15 Application No. 10/051,459
16 Technology Center 1700
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19 Oral Hearing Held: June 8, 2010
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22 Before EDWARD C. KIMLIN, PETER F. KRATZ, and MARK NAGUMO,
23 *Administrative Patent Judges.*
24

25 APPEARANCES:

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1 CLERK: Good morning. Calendar Number 13, Appeal No. 2010-000331,
2 Mr. Neblett.

3 JUDGE KIMLIN: Good afternoon, Mr. Neblett.

4 MR. NEBLETT: Good afternoon, gentlemen.

5 JUDGE KIMLIN: You can start when you're ready.

6 MR. NEBLETT: If it please the Court, I'd like to start off with something a
7 little unusual. I'd like to ask you to, essentially, disregard the Reply Brief
8 that was submitted.

9 As I was preparing for the hearing today, I recognized that I had misread one
10 of the underlying documents and presented an argument that was
11 inconsistent with all of the rest of the record.

12 What I'd really like to do today is focus on a singular issue -- an error in the
13 Examiner's Answer -- which really goes to the heart of the fundamental issue
14 here, the issue being, essentially, whether the Examiner has established a
15 prima facie case of obviousness; or in the alternative, whether it's been
16 rebutted by the record evidence that's been submitted.

17 In order to lay the foundation for the Examiner's error, I'd like to briefly go
18 through the technology. If this whole period takes more than ten minutes,
19 I'll be surprised; but I need to lay that out so you know what the error was
20 and what's going on there.

21 JUDGE KIMLIN: Isn't it your basic position that there's really no teaching
22 or suggestion of abrading a membrane?

23 MR. NEBLETT: It's fairly close to that. When you look at the membrane --
24 in the prior art, the technology -- the prior art -- was invented by this
25 inventor, Dr. Beer, 16 years ago.

1 He came up with the idea of putting together these feedstock solutions,
2 cellular nitrate, and cellulose acetate and forming a casting dope, putting it
3 on the film, and found the film would stick to the material.

4 Once it was dry, you had a very good membrane -- a very delicate
5 membrane -- and, actually, you can see in the 960 reference the structure of
6 the forced membrane that Dr. Beer came up with.

7 JUDGE KIMLIN: Does the primary reference teach at all, or suggest, any
8 cleaning of the membrane after it's formed?

9 MR. NEBLETT: Absolutely not, and that's the heart of the error I want to
10 get to.

11 When you look at the technology -- the problem with this technology is once
12 that membrane is formed, in the prior art it's common knowledge that you
13 couldn't clean the membrane from the low molecular weight impurities
14 which caused filter dust. You couldn't clean them off without, essentially,
15 tearing up the membrane while you were doing it. You'd have just as bad a
16 result as if it was clean.

17 That was the state of the art for about 15 years or so. It was accepted and
18 known. That's in the record, that's in the Declaration that we have here.

19 About eight or ten years later, Dr. Beer looked around and said, you know,
20 I'm going to go against the conventional wisdom here and find out is there a
21 way to deal with this. Because what's happening is the only way to get
22 acceptable membranes is to hyper purify the feedstock materials before you
23 put them in.

24 In other words, take out the contaminants before you make the filter. Very
25 expensive, and a very time-consuming process to do that.

1 JUDGE KIMLIN: So at the time of the present invention, one of ordinary
2 skill in the art wouldn't even think of mechanically brushing a membrane for
3 fear of ruining it?

4 MR. NEBLETT: Exactly, Your Honor. They knew that that would damage
5 the membranes.

6 JUDGE KIMLIN: Which brings up the question: what type of mechanical
7 brushing is your Applicant performing that would not damage it in any way?

8 MR. NEBLETT: It's not so much the type of brushing, it's the timing of the
9 brushing.

10 When Dr. Beer went back and look[ed] at this whole process, the accepted
11 idea in the art was you couldn't do anything until the filter dried.

12 He found that if you took the combination of brushing and rinsing at the
13 same time, which is what's in the claim, that the undried membrane was still
14 resilient enough to resist having the particles very lightly lifted off and
15 flushed away.

16 Again, as you noted, that was exactly the opposite of what was expected in
17 the art. It's a novel idea that in that particular time what's claimed is after the
18 membrane is formed but before it's dried to apply the mechanical brushing
19 and rinsing.

20 If you look at the Examiner's Answer at page 4, there's three sentences that I
21 think sum up the issue here. Again, Your Honor, I think you've gone
22 straight to it.

23 In the second paragraph it says: Dr. Beer teaches a process of producing
24 the membrane by casting directly on the film, yes, we agree with that.

1 Then he says, column 3, lines 45 to 54 teach removing impurities, such as
2 dust, by the addition of water and methanol prior to drying the film. But if
3 you look at that section, that's not what that section teaches.

4 He uses that to say that's the teaching in the Beer patent that says take these
5 out after you form the membrane. Those lines are the beginning of the first
6 embodiment.

7 What they talk about is preparing the solution before the membrane is
8 formed, in fact, before the cellulose material is even added into the material.

9 The first sentence: The polymeric solution is prepared prior to adding the
10 cellulose derivatives. They are first dissolved in acetate solution -- so before
11 we even get to making casting dope -- "and re-precipitated by the addition of
12 methanol and water." That's the water he's referring to. This is all before
13 casting.

14 Then you go a couple of sentences further on like 55: "In a covered
15 tension[ing] machine the casting dope was coated on" the unsupported film
16 which is formed there.

17 So Examiner Alexander, with due respect, I think he simply has made an
18 error here. He looks to that as the teaching in this reference of desirability of
19 cleaning after the membrane is formed. It's simply an error.

20 JUDGE KRATZ: And my understanding is that by doing this re-
21 precipitation and, of course, with that prior art teaching you wouldn't have
22 the dust problems in the formed product.

23 MR. NEBLETT: Precisely. Again, very expensive, very time consuming
24 process. You have to do this multiple times to get it pure enough to get an
25 acceptable membrane when you get out.

1 Again, the art knew you had to spend that money and effort because you
2 couldn't clean it off after you made it. Beer said -- and it's almost ten years
3 before someone looked around and -- you know, a lot of motivation from
4 that cost to come up with something better. Again, secondary consideration
5 is nonobviousness. No one had gone in this direction.

6 With Dr. Beer here -- we've submitted evidence in the form of two
7 declarations, the first one to rebut the initial statement. Well, we think the
8 Examiner looked at the process, saw it was simply brushing, summarily
9 came to the conclusion it was an obvious thing to do, and has since then
10 been kind of post hoc justifying and coming up with reasons.
11 Clearly, the answer we think is the first time where he's actually tried to
12 actually link a reason in the prior art. Again, with respect, we think he's got
13 that wrong.

14 JUDGE KIMLIN: Does the Applicant here get a comparable quality
15 membrane by this brushing as you would by purifying?

16 MR. NEBLETT: I apologize.

17 JUDGE KIMLIN: Does the Applicant here get a membrane that's
18 comparable in quality to the prior art?

19 MR. NEBLETT: Absolutely. In fact, that's what was shown in the second
20 Declaration and test results that we took with the prior art purified version
21 and then the unpurified but brushed during the formation process. The test
22 results showed there was a better resolution on the chemicals as they came
23 through.

1 The one other thing I want to briefly mention, the Examiner has cited the
2 Hasebe reference as teaching brushing being notoriously well known. We
3 agree. It was notoriously well known.

4 But Dr. Beer hasn't claimed that brushing is a novel idea. What he's come in
5 here and said is the nonobvious invention here was to come back in the
6 middle period, while it's being formed, and do something that the art didn't
7 think you could do.

8 Again, where we ultimately come out is, you know -- if you bear with me,
9 I'm going to take the words straight out of KSR. We don't think there's a
10 reason that would have prompted a person of ordinary skill in the art to
11 combine the elements here through these process steps. We don't think the
12 Examiner has done the prima facie job he needs to.

13 In the alternative, if you thought he did, he's done nothing to rebut the
14 evidence from one of the most experienced people in this field. He's a
15 senior researcher, 38 years in this field, tremendously well respected.

16 The Examiner's response to his Declaration which explains what the state of
17 the art was, explains why people weren't going this way, and why he came
18 up with something -- the Examiner's response was respectful, but it was, you
19 know, essentially, we've admired what you've done, but we don't believe
20 you.

21 So, again, we believe on this record he hasn't done his job to the extent he
22 needs to; and he has not rebutted the evidence that's in the record.

23 JUDGE KIMLIN: Any further questions?

24 JUDGE KRATZ: No questions.

25 JUDGE NAGUMO: No questions.

1 JUDGE KIMLIN: I think we understand the case.
2 MR. NEBLETT: Thank you very much.
3 Whereupon, the proceedings at 1:46 p.m. were concluded.
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